AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method of detecting a sequence of information symbols from a first signal subjected to inter-symbol interference, wherein each symbol of the sequence of information symbols can adopt one of a plurality of different values, said method being performed as at least one signal processing path, the method comprising:

setting, in each of said at least one signal processing path, a symbol in the sequence of information symbols to a value based on an intermediate signal derived from said first signal and a feedback signal generated on the basis of one or more previously set symbols;

dividing a signal processing path, in which said intermediate signal for a given symbol exceeds a given threshold, into two separate signal processing paths, setting said given symbol to different values in each of said two separate signal processing paths;

selecting, after setting at least one symbol, the sequence of information symbols from one of said at least one signal processing path as a detected sequence of information symbols; and

adjusting said given threshold in accordance with an estimate of noise in said intermediate signal.

2.   (Previously Presented) A method according to claim 1, wherein said noise is estimated by use of a known sequence of symbols in said first signal.

3.   (Previously Presented) A method according to claim 2, wherein, when said first signal includes a number of blocks of information symbols including the known sequence of symbols, said estimate of said noise is performed continuously.

4.   (Previously Presented) A method according to claim 2 or 3, wherein said noise is estimated as a mean error distance between said known sequence of symbols and corresponding symbols of said intermediate signal multiplied by a given factor.

5.   (Currently Amended) A method according to any one of claims 1-3, wherein a given signal processing path is canceled when a first metric thereof is larger than a metric of a second given signal processing path and a given number of corresponding previously set symbols in said given signal processing path and said second given signal processing path are equal.

3

6.   (Currently Amended) A method according to any one of claims 1-3, wherein a given signal processing path is canceled when a first metric of the given signal processing path exceeds a metric of ~~at least one of all other~~ a second given signal processing ~~paths~~ path by a given predefined amount.

7.   (Previously Presented) A mobile station adapted to detect a sequence of information symbols from a first signal subjected to inter-symbol interference, wherein each symbol of said sequence of information symbols can adopt one of a plurality of different values, said mobile station adapted to detect at least one signal processing path, said mobile station comprising:

setting means adapted to set, in each of said at least one signal processing path, each symbol in the sequence to a value based on an intermediate signal derived from said first signal and a feedback signal generated on the basis of one or more previously set symbols;

dividing means adapted to divide a signal processing path, in which said intermediate signal for a given symbol exceeds a given threshold, into two separate signal processing paths, whereby said given symbol is set to different values in each of said two separate signal processing paths;

selecting means adapted to select, after setting at least one symbol, the sequence of information symbols from one of said at least one signal processing path as a detected sequence of information symbols; and

adjusting means adapted to adjust said given threshold in accordance with an estimate of noise in said intermediate signal.

8.   (Previously Presented) A mobile station according to claim 7, wherein said adjusting means is adapted to estimate said noise using a known sequence of symbols in said first signal.

9.   (Previously Presented) A mobile station according to claim 8, wherein when said first signal includes a number of blocks of information symbols including a *Said* known sequence of symbols, said adjusting means being adapted to perform estimation of said noise continuously.

10.   (Previously Presented) A mobile station according to claim 8 or 9, wherein said adjusting means is adapted to estimate said noise as a mean error distance between a *Said* known sequence of symbols and corresponding symbols of said intermediate signal multiplied by a given factor.

4

11.   (Currently Amended) A mobile station according to any one of claims 7-9, wherein said selecting means is further adapted to cancel a given signal processing path, when a metric thereof is larger than a metric of a second given signal processing path, and a given number of corresponding previously set symbols in said given <u>signal processing path</u> and said second given signal processing path are equal.

12.   (Currently Amended) A mobile station according to any one of claims 7-9, wherein said selecting means is further adapted to cancel a given signal processing path when a metric of the given signal processing path exceeds a metric of ~~at least one of all other~~ <u>a second given</u> signal processing ~~paths~~ <u>path</u> by a given predefined amount.